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ABSTRACT

All teacher education students in Texas must pass three minimum competency examinations to be admitted to a teacher education program. The Pre-Professional Skills Tests (PPST) contains three separate tests in reading, mathematics, and writing. West Texas State University requires all entering freshmen to submit scores from the American College Testing Program (ACT), which is composed of academic tests on English usage, mathematics usage, social studies, reading, and natural science reading. Taken during the high school senior year, these tests have primarily been used to assess students' educational development and ability to do college work. It was hypothesized that there may be a significant correlation between certain parts of the PPST and the ACT. A comparative analysis was made of the scores of 129 students who took both tests. A significantly high correlation was found in each category of the two tests; the composite ACT correlated with all three PPST scores and was highest with the total PPST score. Questions are raised on the necessity of the PPST tests. (JD)

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A Study of the Relationship of Pre-Professional Skills Tests and American College Tests

by W. M. Stoker and
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All teacher education students in Texas must pass three minimum competency examinations to be admitted to a teacher education program. These first exams were administered March 3, 1984.

The Texas Education Agency contracted with Education Testing Service to prepare a battery of tests called Pre-Professional Skills Tests (hereafter called PPST). There are three separate tests: Reading, Mathematics, and Writing. Each test is reported on a scale of 150-190 and was designed to provide information about proficiency in communication and computation skills. The Texas Education Agency mandated these tests as an attempt to guarantee that all future Texas teachers are minimally competent in these three areas.

For several years West Texas State University, along with many other colleges and universities, has required all entering freshman to submit scores from the American College Testing Program (hereafter referred to as ACT). These tests are also prepared and administered by American College Testing Programs and are composed of four academic tests: English Usage, Mathematics Usage, Social Studies, Reading, and Natural Science Reading.

These tests are designed to assess students' educational development and ability to do academic work in college. Although W. T. S. U. requires these scores, it has never set a minimum score for admission. The results have been primarily used for counseling purposes and data gathering. These tests are typically taken during the high school senior year or between high school graduation and college entrance.

All four subtests and a composite score are reported on a scale of 1-36 with an approximate national mean of 18. The authors hypothesized that there may be a significant correlation between certain parts of the PPST and ACT.

Since PPST does not measure social studies and natural sciences, these researchers emphasized ACT's English and Mathematics sections although they did study the ACT composite score.

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This research is based on scores of 129 students who took the PPST at W. T. S. U. on March 3, 1984 for whom the registrar's office had complete ACT scores. Although this study does not include all students taking the PPST, it is assumed that there is no other selectivity involved.

Most of these people taking the PPST were junior or senior college students whose ACT had been taken prior to enrolling in college as freshmen.

Table I gives certain statistics on PPST scores made by this group, showing range, mean, median, and mode. It should be noted that the composite PPST was acquired by adding all three tests and is not a true composite reported by ETS.

TABLE I

Statistics of 129 Students Taking PPST at W. T. S. U.

PPST	Minimum Passing Score	Range	Mean	Median	Mode
Reading	172	159-189	176	176	177
Mathematics	171	169-190	177	177	179
Writing	173	165-185	175	175	174
Composite	*	490-559	528	527	511

*Not applicable

Table II gives similar statistics of ACT scores achieved by this same group. The composite scores are standardized scores reported by ACTP and includes science and social science in addition to English and mathematics.

TABLE II

Statistics of 129 W. T. S. U. Students' ACT Test Scores

ACT	Range	Mean	Median	Mode
English	7-31	19.03	19.	21
Mathematics	1-30	15.64	15	12
Composite	8-31	18.29	18	14

Table III relates correlations found by the Pearson-Product-Moment statistic. A perfect correlation would be expressed as 1.0, and a complete absence of correlation would be shown as 0. All four correlations are statistically significant and positive. These correlations are particularly impressive when one considers they are between two different tests, one taken before the freshman year and the other after several semesters of college. It was interesting, to the researchers at least, that the highest correlation (.77) was between the composite scores on both tests. This may indicate that the ACT is an excellent predictor of scores most students will make later on the PPST.

TABLE III

Correlation of PPST Tests and ACT Tests

PPST	Math	and	ACT	Math	.70
PPST	Writing	and	ACT	English	.75
PPST	Reading	and	ACT	English	.68
PPST	Composite	and	ACT	Composite	.77

Composite ACT scores' correlation to the three subtests of PPST are depicted in Table IV. All three show correlations between .61 and .69; the lowest correlation is .61, between ACT composite and PPST writing. It should be noted that the PPST writing test includes a writing sample and all of ACT is multiple choice questions.

TABLE IV

Correlation of ACT Composite Scores and PPST SubTests

PPST Math and	ACT Composite	.69
PPST Writing and	ACT Composite	.61
PPST Reading and	ACT Composite	.67

An analysis of these 129 scores revealed that <u>all</u> (8) students who scored below 12 on the ACT composite failed one or more of the three PPST tests.

Some interesting results were discovered in analyzing the individual scores. One of the most unusual was a student who scored 01 on the Math section of ACT and passed Math on PPST.

Another student scored 20 on the ACT composite and failed the writing on the PPST. Still another student scored 20 on the ACT and failed Reading on the PPST.

These apparently extreme cases seem to indicate that some students take advantage of the time lag between the two tests.

Summary and Implications

A significantly high correlation was found in each category of the PPST and ACT of 129 W. T. S. U. students who took the PPST on March 3, 1984. The composite ACT correlated with all three PPST scores and was highest with the total PPST score.

If repeated studies show these same results, it would seem that PPST tests may be unnecessary: Long established ACT scores will, to a large extent, provide reliable measures of students' basic literacy.

A somewhat distressing possibility is that college English and mathematics courses may not improve students' ability to score well on the PPST. Perhaps the content of English literature and mathematics classes does not relate to basic skills. Of course, many college instructors in these two areas believe college students should have basic literacy before enrolling in college.

Another implication for Colleges of Education is that ACT results could be utilized more in admission to teacher education and in counseling students who want to be teachers. If additional data and studies substantiate these results, perhaps students should not be considered for a teacher education program unless they can score above a certain ACT level, such as 12, 13, 14, or higher.

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